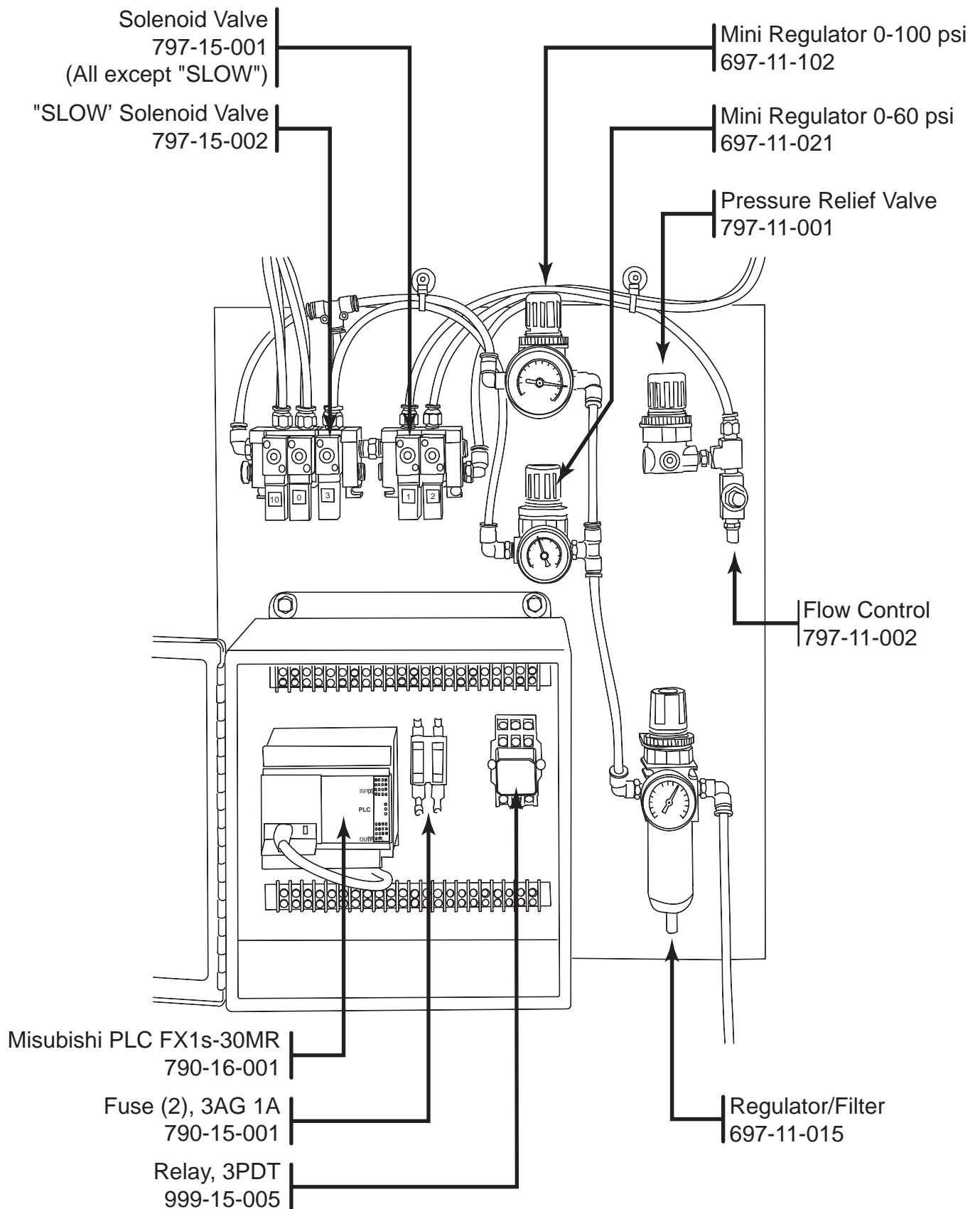


# *OmniTurn*

## Technical Documentation

### Zip Loader G3 CNC Inverter Drive

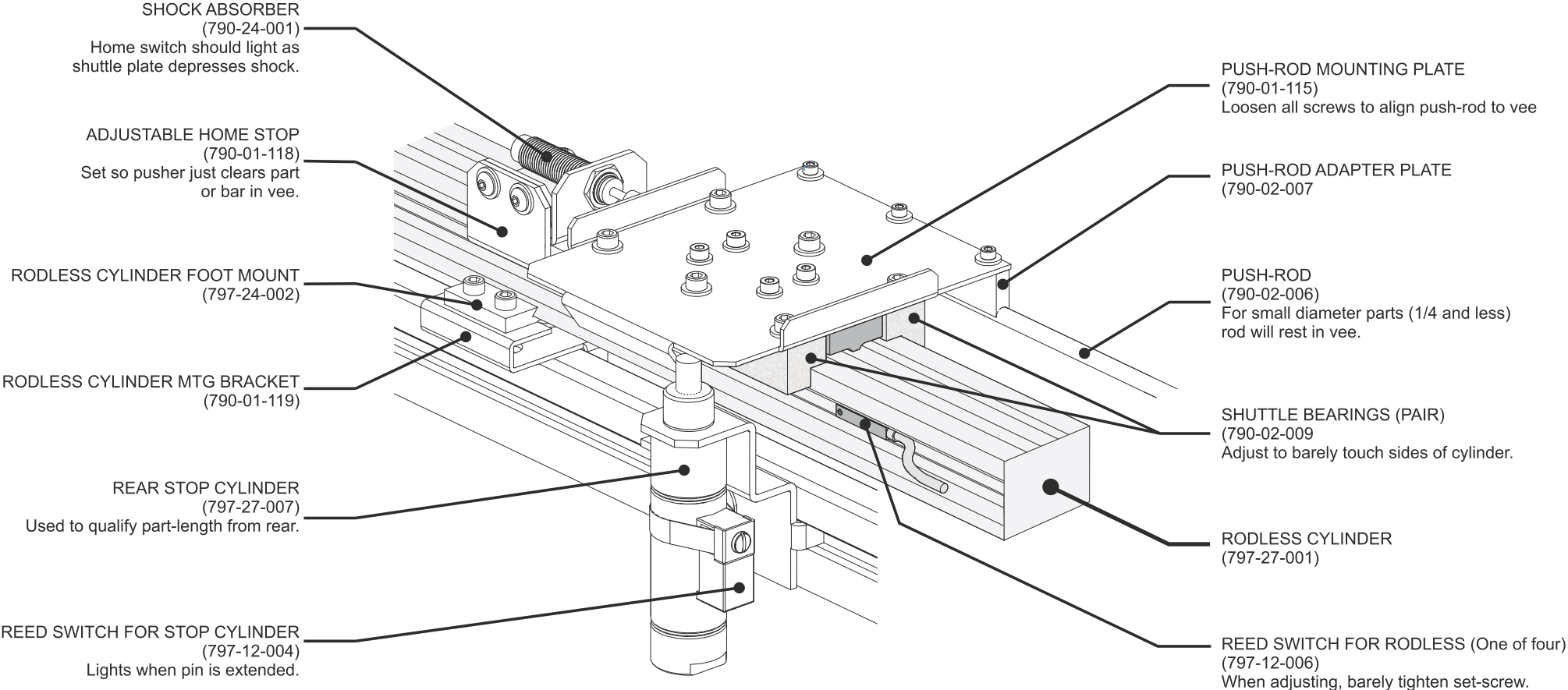
- 
- This package contains **important technical documentation** to supplement your manual.
  - **Updated schematics** or documents and instructions specific to your OmniTurn are enclosed.
  - **NOTE:** Includes schematics for both Inverter & C-Axis Drives
-

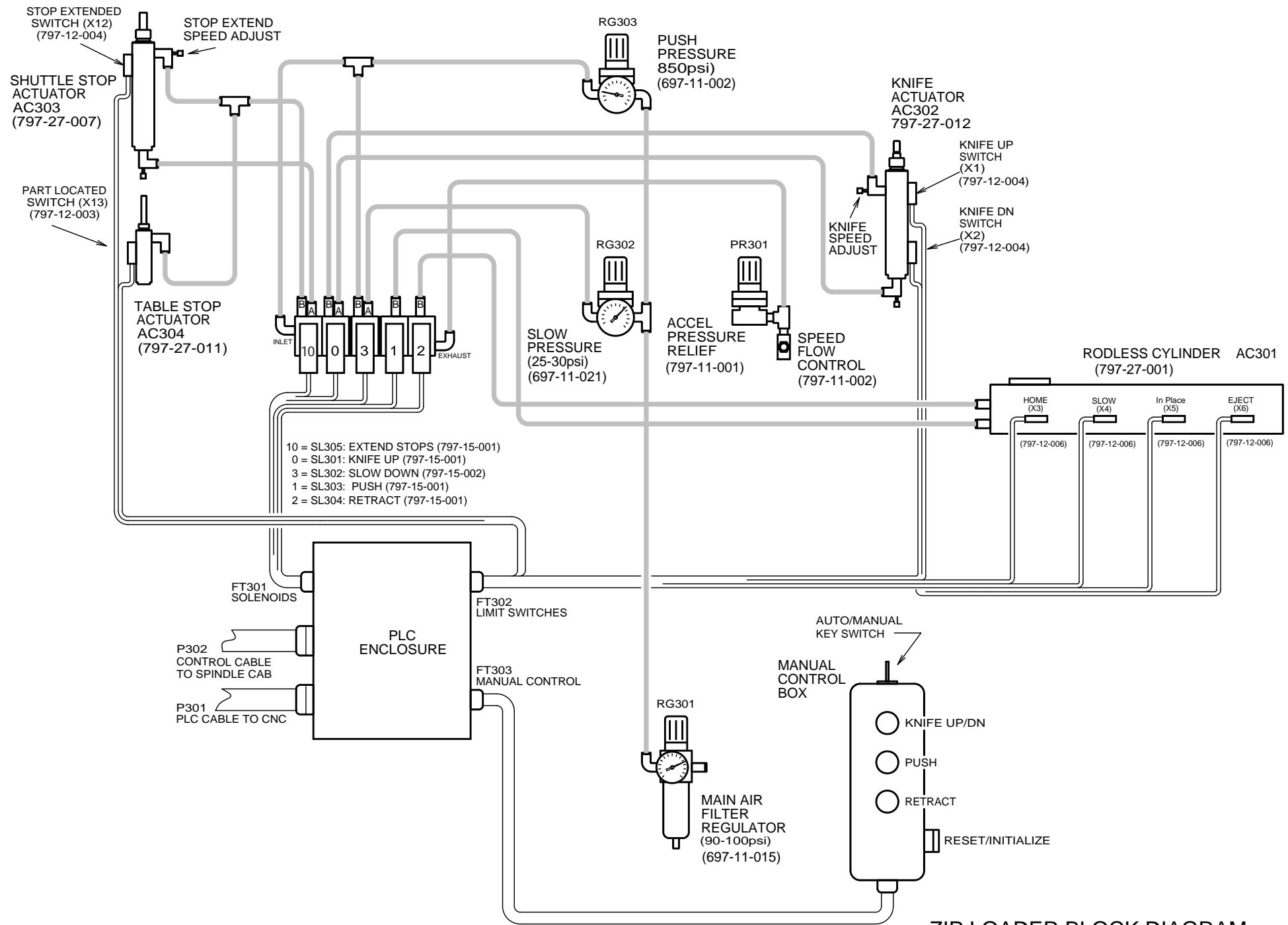


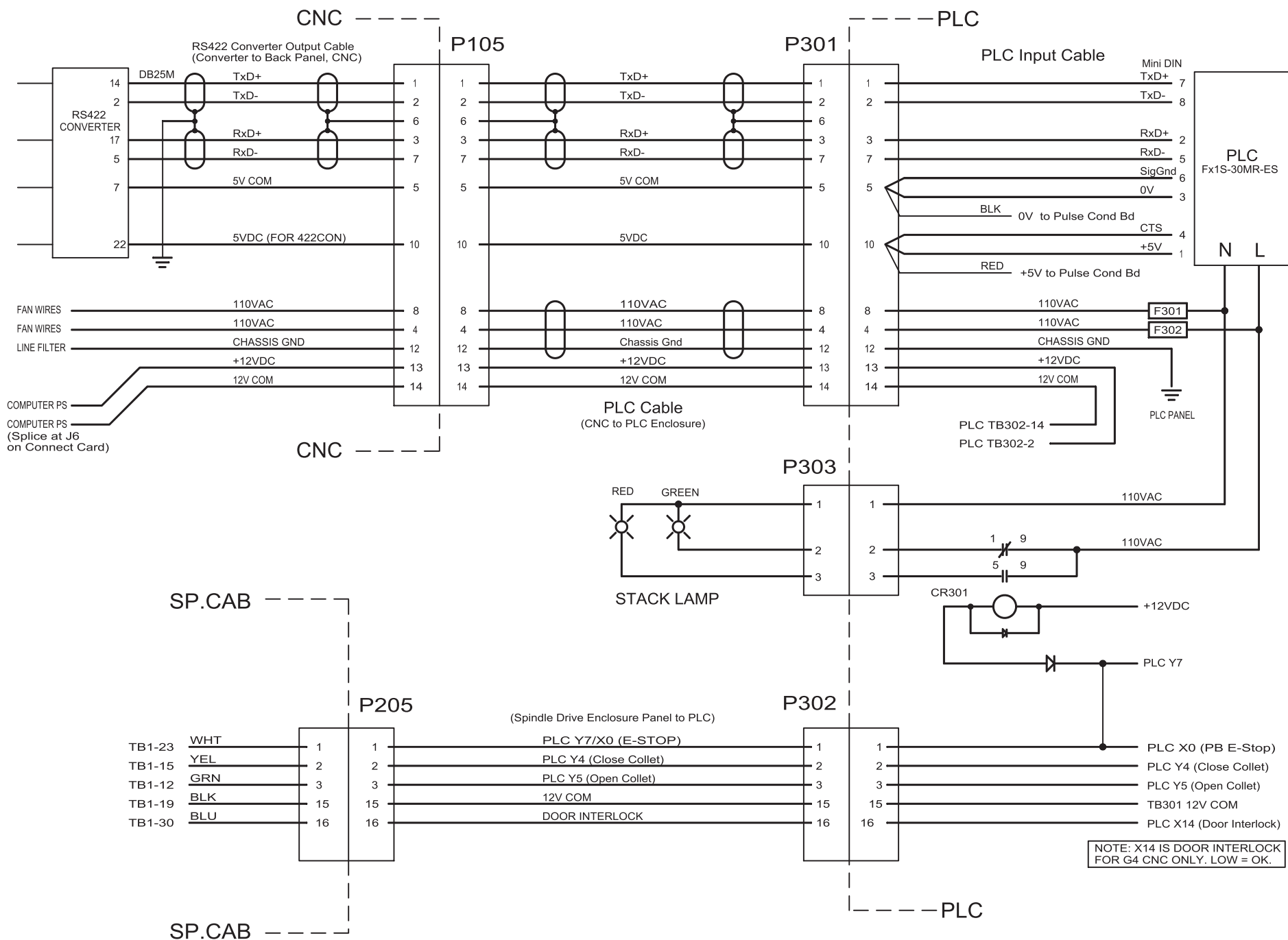
# OmniTurn ZipLoader

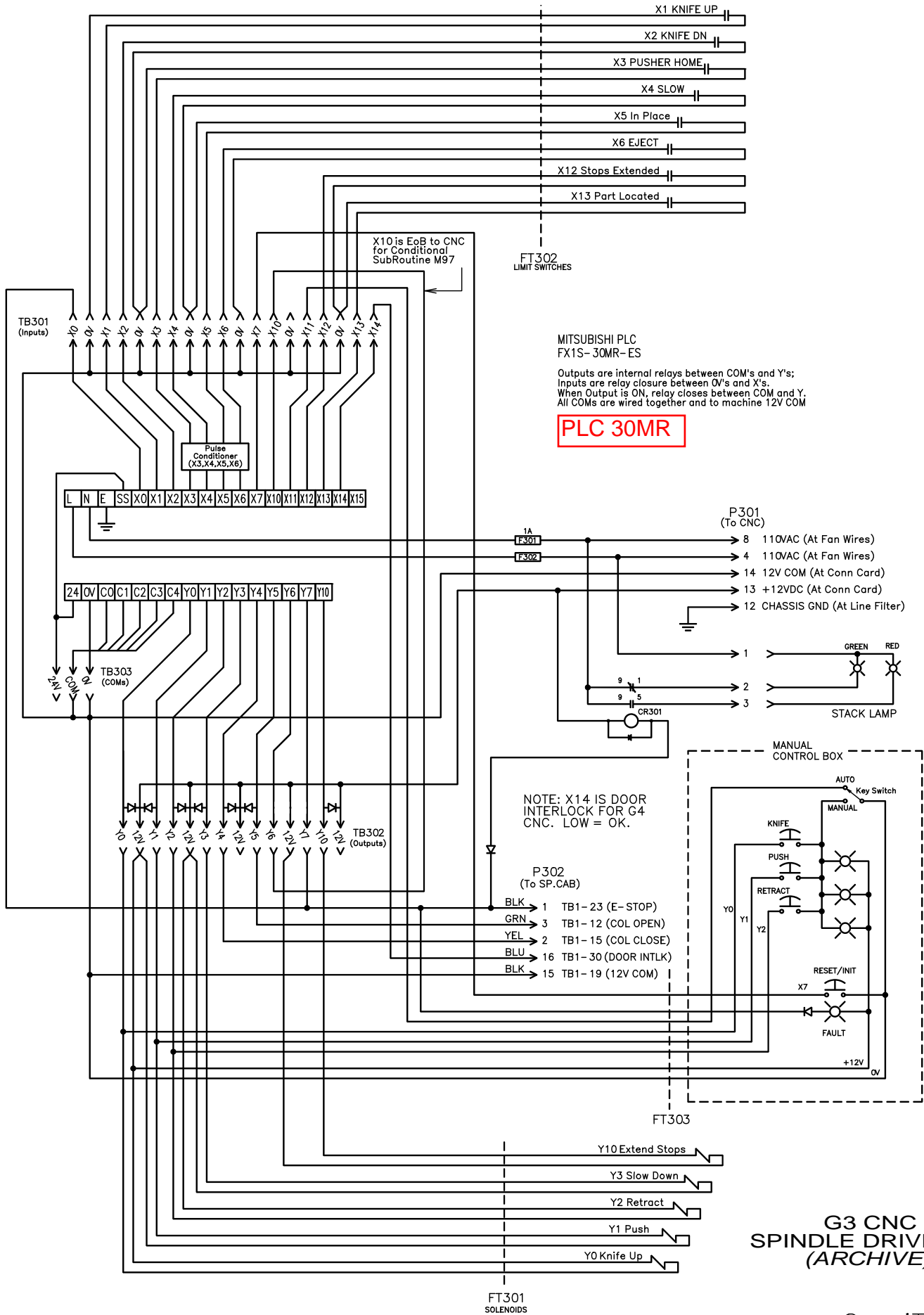
## Air Panel Parts List

# OmniTurn ZipLoader Shuttle Description

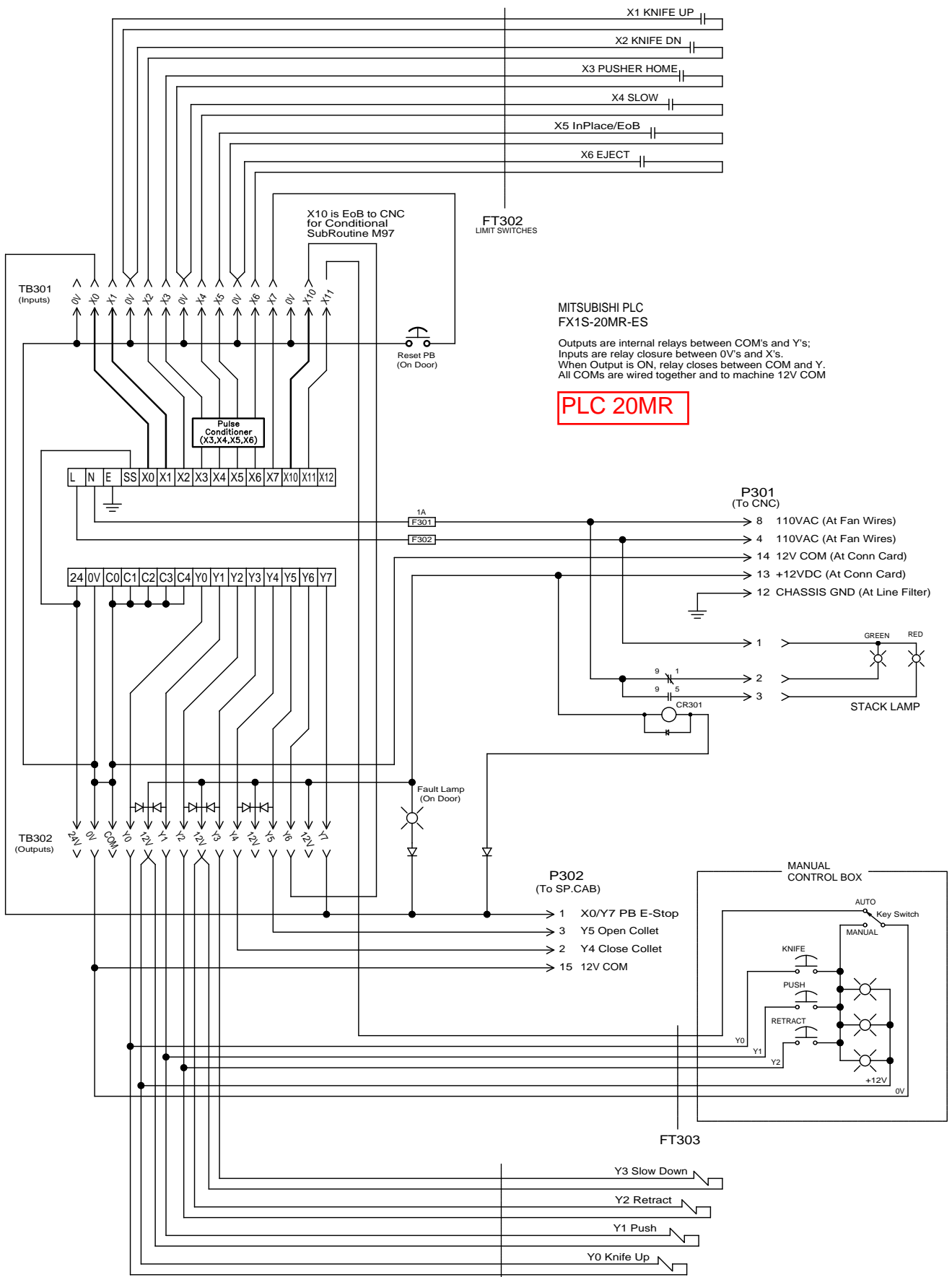








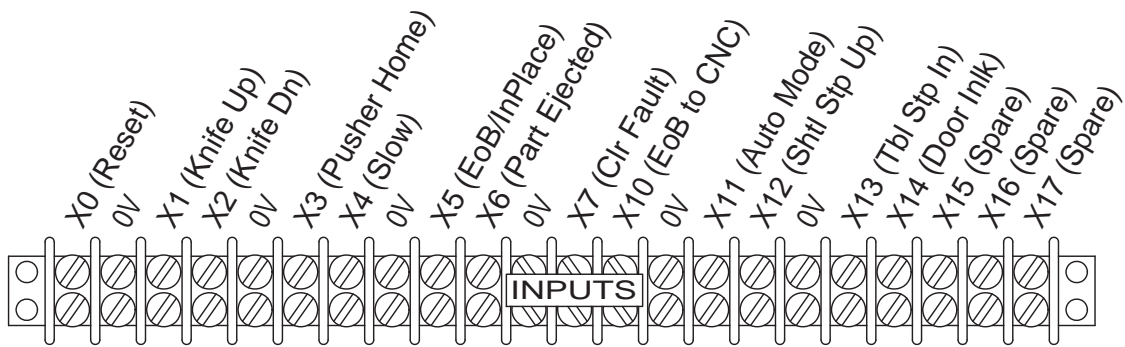
**G3 CNC  
SPINDLE DRIVE TB1  
(ARCHIVE)**



MITSUBISHI PLC  
FX1S-20MR-ES

Outputs are internal relays between COM's and Y's;  
Inputs are relay closure between 0V's and X's.  
When Output is ON, relay closes between COM and Y.  
All COMs are wired together and to machine 12V COM

**PLC 20MR**



**Inputs:**

- X0 = E-Stop from CNC
- X1 = Knife is Up
- X2 = Knife is Down
- X3 = Pusher at Home
- X4 = Lower Pressure
- X5 = End of Bar Switch
- X6 = Pusher at End
- X7 = Clear Fault (PB)
- X10 = EoB to CNC (M97)
- X11 = Auto Mode
- X12 = Shuttle Stop Up
- X13 = Table Stop Depressed
- X14 = Door Interlock (NOT G3 CNC)

**Outputs:**

- Y0 = Knife Up (Else down)
- Y1 = Push
- Y2 = Retract
- Y3 = Low Pressure to Pusher
- Y4 = Clamp Collet
- Y5 = UnClamp Collet
- Y6 = End of Bar (Wired to X10)
- Y7 = Fault (E-Stop to CNC)
- Y10 = Extend Stops
- Y11 = Part Mode
- Y12 = Stop Mode
- Y11 & Y12 = 2Part Mode
- Y13 - Y15 = Spare

**Programming:**

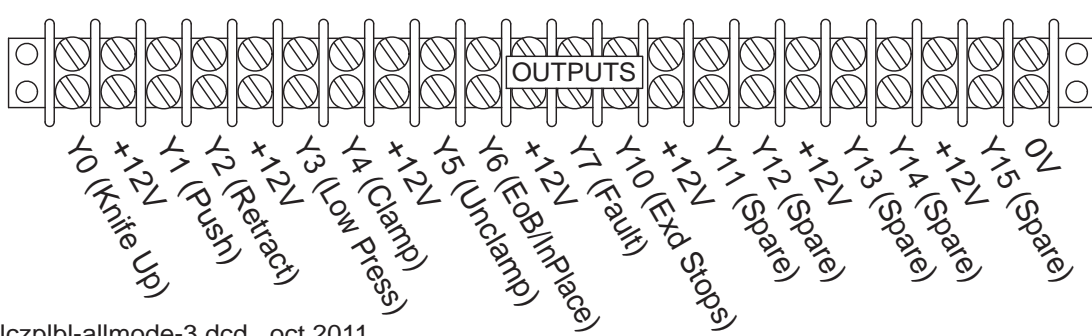
- M10 = Stop Feed Close Collet\*
- M11 = Open Collet Start Feed\*
- M40 = Knife Up
- M41 = Knife Down
- M42 = Push Slow (soft)
- M43 = Retract (Edit to suit)
- M44 = Stop Pusher
- M45 = Extend Stops
- M46 = Retract Stops
- M47 = Load New Bar or Part
- M48 = Eject
- M49 = Push Fast (hard)
- M50 = Set Bar Mode
- M51 = Set Part Mode
- M52 = Set Stop Mode
- M53 = 2Part Mode
- M55 = 2Part Mode, slow switch
- M56 = Force Loader Fault



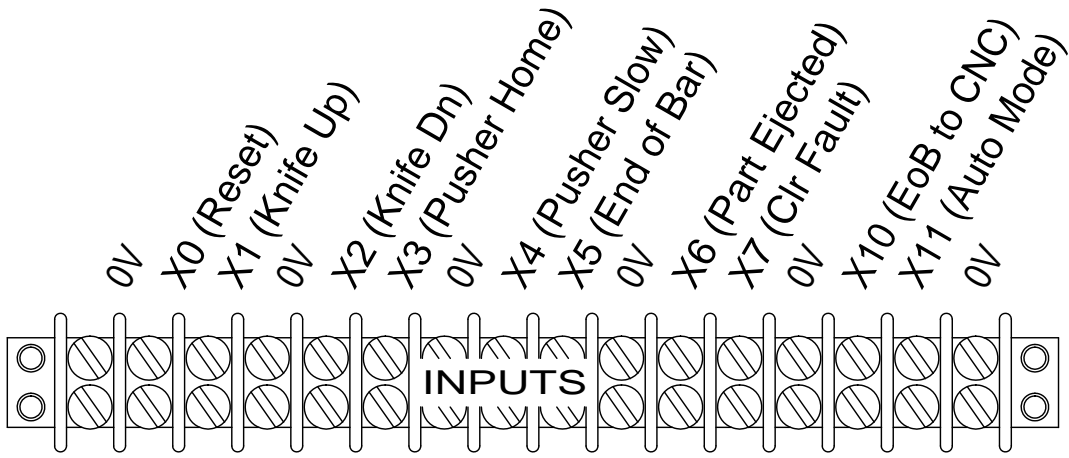
PLC 30MR

110VAC  
(From CNC)

\*2part M10 = Close Collet and escape next part to vee.  
\*2part M11 = Open Collet eject finished part, present next part.







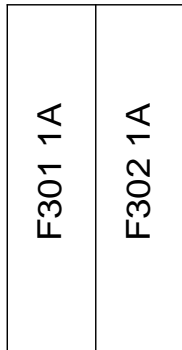
Inputs:

X0 = E-Stop from CNC  
 X1 = Knife is Up  
 X2 = Knife is Down  
 X3 = Pusher at Home  
 X4 = Lower Pressure  
 X5 = End of Bar Switch  
 X6 = Pusher at End  
 X7 = Clear Fault (PB)  
 X10 = EoB to CNC (M97)  
 X11 = Auto Mode

Outputs:

Y0 = Knife Up (Else down)  
 Y1 = Push  
 Y2 = Retract  
 Y3 = Low Pressure to Pusher  
 Y4 = Clamp Collet  
 Y5 = UnClamp Collet  
 Y6 = End of Bar  
 Y7 = Fault (E-Stop to CNC)

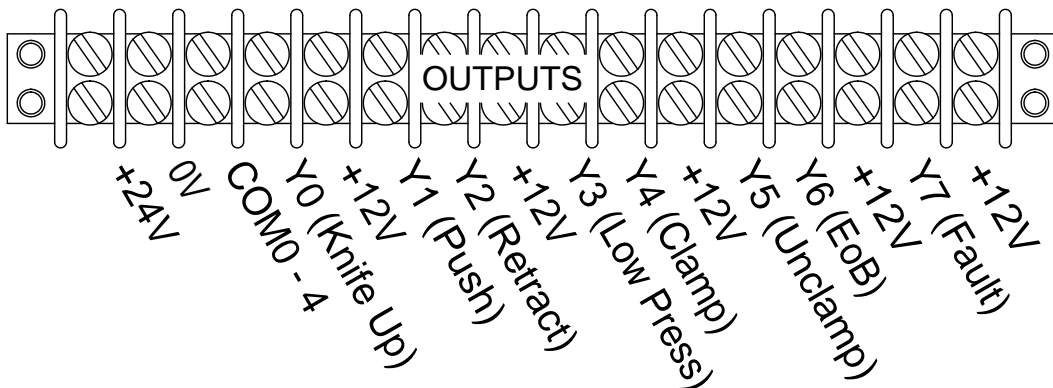
**PLC 20MR**

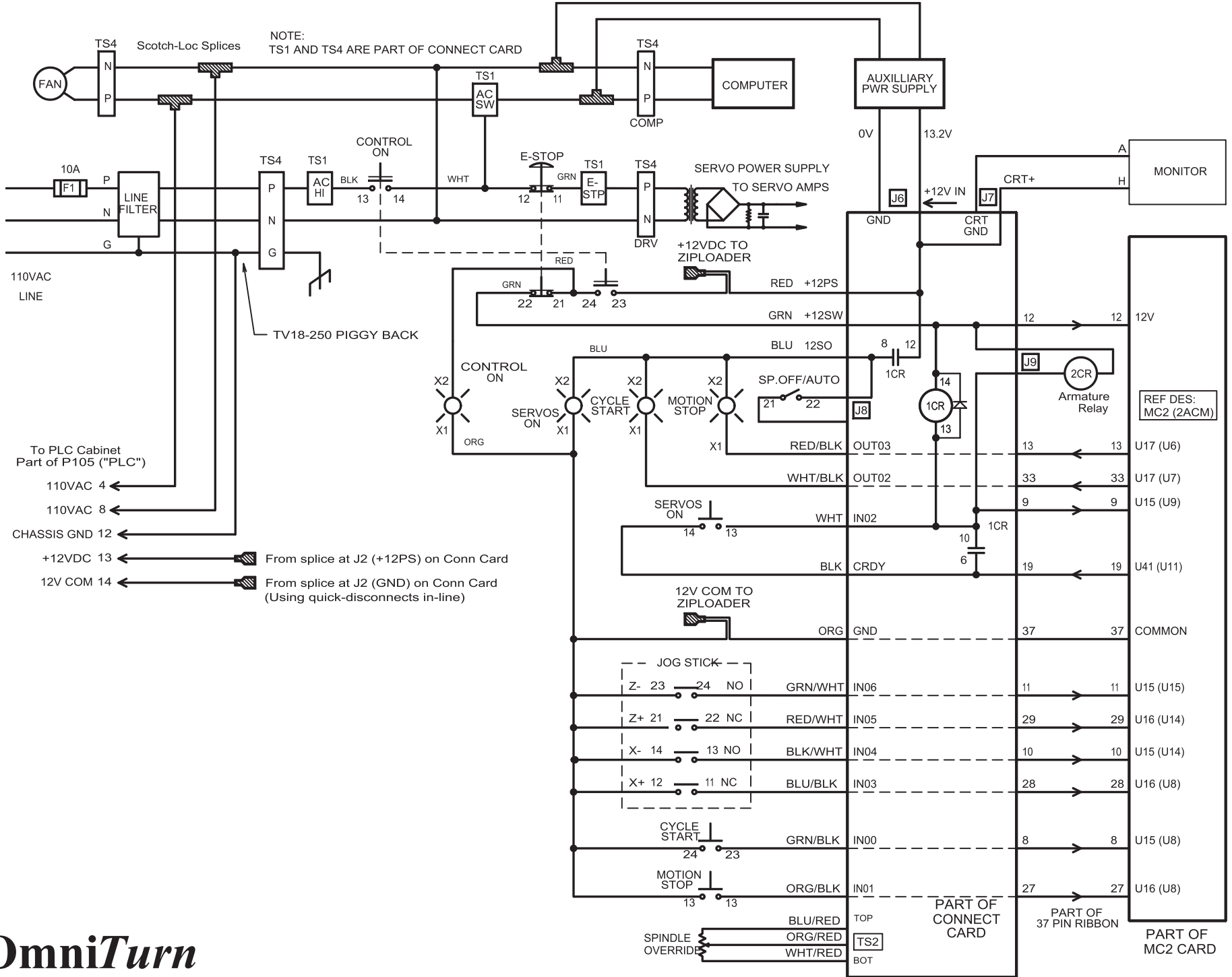


110VAC  
 (From CNC)

Programming:

M10 = Stop Feed & Clamp Collet  
 M11 = Unclamp Collet & Start Feed  
 M40 = Knife Up  
 M41 = Knife Down  
 M42 = Push Slow (low pressure)  
 M43 = Retract (Edit to suit)  
 M44 = Stop Pusher  
 M47 = Load New Bar or Part  
 M48 = Eject Remnant or Finished Part

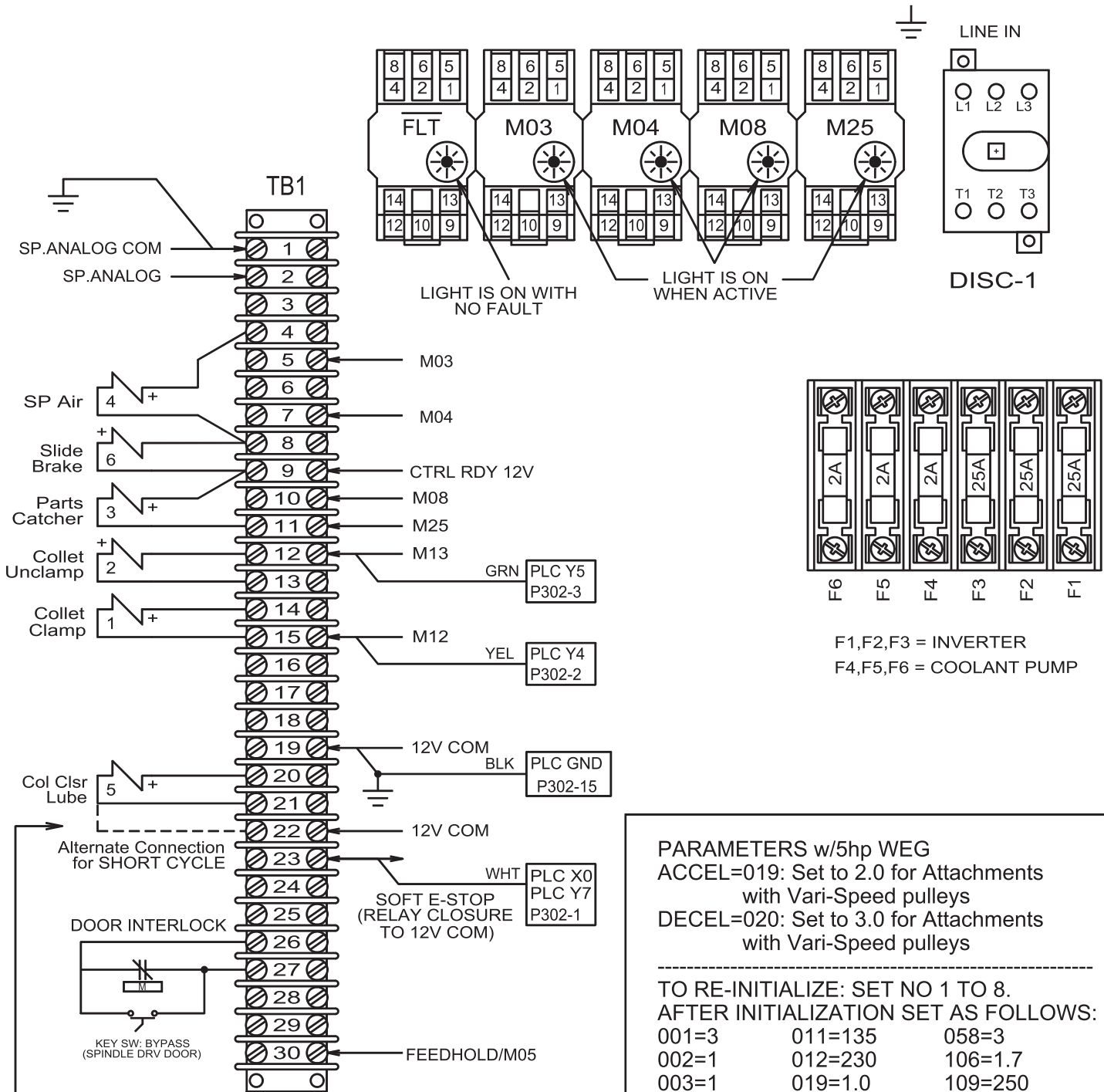




**OmniTurn**

FRONT PANEL INTERFACE: ZipLoader G3 CNC

NOTE: This drawing includes optional components and references not on all panels.



**PARAMETERS w/5hp WEG**  
 ACCEL=019: Set to 2.0 for Attachments with Vari-Speed pulleys  
 DECEL=020: Set to 3.0 for Attachments with Vari-Speed pulleys

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TO RE-INITIALIZE: SET NO 1 TO 8.  
 AFTER INITIALIZATION SET AS FOLLOWS:

001=3	011=135	058=3
002=1	012=230	106=1.7
003=1	019=1.0	109=250
004=2	020=1.0	110=23
007=1	036=12.9	001=1 (LOCK)

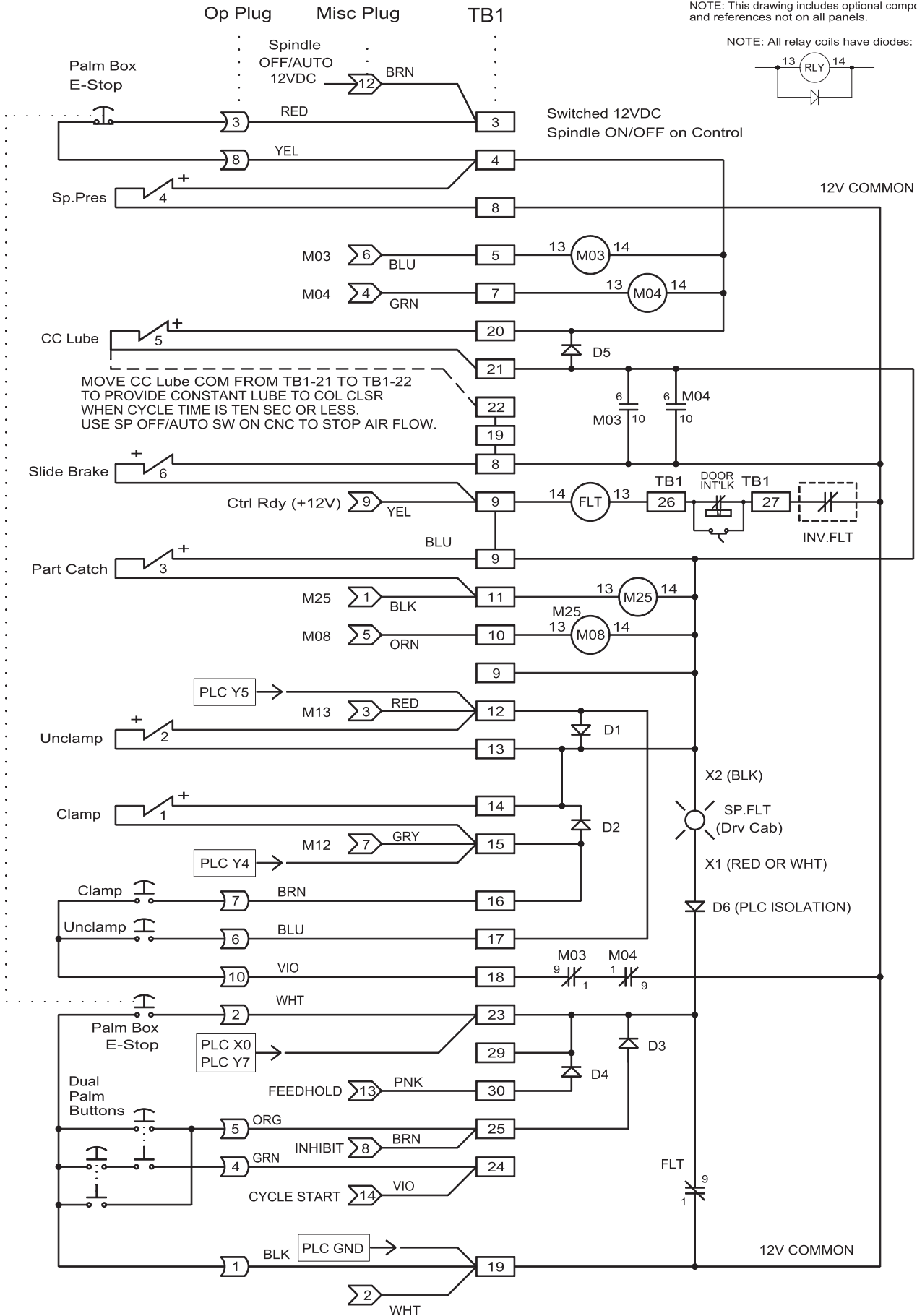
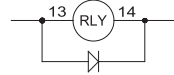
NOTE: If you are NOT using WEG 5hp motor, 036,106 & 110 must be set: refer to GPD315 manual, page 2.3 thru 2.5

**"SHORT CYCLE OPERATION"**

MOVE CC Lube COM FROM TB1-21 TO TB1-22 (BLK WIRE FROM GRAY CABLE ON LEFT SIDE) TO PROVIDE CONSTANT LUBE TO COL CLSR WHEN CYCLE TIME IS TEN SEC OR LESS.

NOTE: This drawing includes optional components and references not on all panels.

NOTE: All relay coils have diodes:



MOVE CC Lube COM FROM TB1-21 TO TB1-22 TO PROVIDE CONSTANT LUBE TO COL CLSR WHEN CYCLE TIME IS TEN SEC OR LESS. USE SP OFF/AUTO SW ON CNC TO STOP AIR FLOW.

ZIPLOADER

G3 CNC

OmniTurn

INVERTER SPINDLE CONTROL LOGIC